PUBLIC HEALTH IN ACTION
2

Experiences with primary health care in Zambia

Edited by
Joseph M. Kasonde
&
John D. Martin

World Health Organization
Geneva

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WHO Library Cataloguing in Publication Data

Experiences with primary health care in Zambia / edited by Joseph M. Kasonde & John D. Martin.

(Public health in action 2)

1. Primary health care 2. National health programmes
3. Health policy 4. Zambia I. Kasonde, Joseph M. II. Martin, John D. III. Series

ISBN 92 4 156169 6 (NLM Classification: W 84.6)
ISSN 1020–1629

TYPESET IN INDIA
PRINTED IN ENGLAND
93/9810-Macmillan/Clays/TWC-7500

Preface

The International Conference on Primary Health Care held in Alma-Ata in 1978 was a landmark in the history of international health. Never before or since has the commitment of the world community to health development and equity in health been so clearly articulated. But the transformation of intentions to practice had to be left to individual countries which alone could translate the Declaration of Alma-Ata into better health for their peoples. The assessment of progress and impact must therefore be based on the experiences of individual countries or communities.

This book describes the experience of one country in trying to implement primary health care. That country is Zambia, which was officially designated as a least developed country in 1991 after two decades of serious economic decline.

WHO is publishing this book as part of its efforts to stimulate more thought, discussion and action on the complex issue of how to make primary health care work. In choosing Zambia, WHO is demonstrating its concern to see much greater global interest and support for countries and peoples in greatest need.

The contributors to the book have all had personal involvement in implementation of the primary health care approach in Zambia at various times since the Alma-Ata Conference. Whether based in the Ministry of Health at national level, in the University of Zambia or working in district projects supported by nongovernmental organizations, their respective experiences and insights combine to provide a unique account of the complex process of establishing a health system based on primary health care.

Much time has been devoted to international debate on whether primary health care has been a success or a failure. It seems to us that this is a futile exercise which reflects a serious lack of understanding of the fact that health development will always depend on a number of fundamental factors, and particularly on economic development. The principles of primary health care are guidelines whose application will increase a country's ability to achieve health for all, but only within the parameters of its own economic realities. Thus, in the case of Zambia, the spiralling decline which set in during the early 1970s has been a major obstacle.

Nevertheless, WHO remains convinced that the principles of primary health care, beginning with equity, are the only means of achieving a

meaningful improvement in the health of entire populations. The challenge of how to bring this to operational reality has turned out to be much more complex, difficult and exacting than had been foreseen.[1]

The fact that primary health care can work is evidenced by many examples, both small and large in scale, from around the world. Zambia provides some such examples. Nevertheless, it is as yet rare to find entire national systems that are able to sustain the primary health care approach successfully.

What are the ingredients of success? The WHO Consultative Committee on Primary Health Care Development identified the following criteria.[1] We reproduce them to assist the reader in analysing the Zambian experience:

- persisting national political, social and financial commitment, with clear policy and administrative guidelines that reach to the periphery;
- strong management capabilities that can implement the programmes, including management information systems that track equity and effectiveness and point towards those who are especially at risk;
- health personnel oriented and trained so as to understand and have their own commitment to the implementation of primary health care;
- decentralization to district and subdistrict levels so that management decisions can be made with close relevance to local conditions;
- community participation with active involvement in local decisions about primary health care planning and implementation;
- sustained financing, preferably with community input to the extent that it will engender a sense of ownership but without inhibition of usage;
- primary health care programmes that bring life-saving technologies to individual families at costs that are affordable even in the midst of poverty.

It remains to be seen whether or not the experiences described in this volume constitute success. But they certainly confirm our view that a prerequisite for progress in implementing primary health care programmes is the recording and analysis of previous experiences. If the chapters that follow have raised questions about the value of selected approaches to

[1] *Primary health care towards the year 2000: a report of the Consultative Committee on Primary Health Care Development, Geneva, 9-12 April, 1990* (unpublished document WHO/SHS/90.1, available on request from Division of Strengthening of Health Services, World Health Organization, 1211 Geneva 27, Switzerland).

primary health care and suggested answers, then the book, at least, has succeeded.

J.M. Kasonde
J.D. Martin

The editors of this book are grateful to Miss Peggy Chibuye of the University of Zambia School of Medicine, Department of Nursing, who first proposed the writing of these chapters.

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CHAPTER 1

Zambia — a country profile

J.D. Martin

Zambia covers an area of 752 610 km^2 in central-southern Africa. It is land-locked and shares common borders with Zaire and the United Republic of Tanzania in the north, Malawi in the east, Mozambique, Zimbabwe and Namibia to the south, and Angola to the west.

Despite its large size the population is only 8 million (1990) of which 55% live in urban areas and 45% in rural areas. This population breakdown makes Zambia the most urbanized country in Africa. In the rural areas the population is widely scattered with an overall population density of seven per km^2, although in some places such as the North Western Province this may be as low as three per km^2. These crude statistics illustrate both the results of a long-standing industrial orientation, with people migrating to the mining towns of the Copperbelt in search of employment, and the development challenges of the post-1970s during which time the Zambian economy has suffered one of the world's steepest and most sudden downturns. In 1991 Zambia was one of six countries which dropped from the middle-income category to that of least developed. How can Zambia cope with the unemployed, the underemployed and growing poverty in the cities and towns? How can Zambia provide financial, technical and social support to the scattered small farmers so as to develop the neglected rural economy? How can Zambia sustain a system of health care which can deliver effective curative and preventive services to the majority of the population, sufficient to halt and then reverse the decline in health status? These are questions that have confronted government since the economic decline began in 1975. They form the backdrop against which the story of primary health care is traced.

Legacies of pre-independence Northern Rhodesia

The Republic of Zambia came into existence on 24 October 1964, emerging from the former British colony of Northern Rhodesia to become an independent state. The economy of Northern Rhodesia was built on the exploitation of the wealth of mineral deposits, mainly copper. The copper mines attracted immigrants of European descent from Southern Rhodesia (now Zimbabwe) and South Africa. They were accompanied by a small number of farmers who established often large, so-called commercial farms along the principal railway line leading south. The development of the

mines also attracted large numbers of indigenous workers in search of employment, triggering the drift from rural areas and causing gradual growth of the urban population.

As in southern Africa as a whole, the European minority sought to consolidate its hold on economic and political power. In 1953 this found expression through the establishment of the Central African Federation comprising Northern Rhodesia (Zambia), Southern Rhodesia (now Zimbabwe) and Nyasaland (now Malawi), all with sizeable European settler populations. Neglect of education facilities for indigenous people and restrictions on employment opportunities were two means by which settler supremacy was to be secured. The limited expenditure on education was mainly restricted to primary schools. As a consequence, by 1960, there were only 2500 black secondary school students in the whole of Northern Rhodesia. By the time independence was attained in 1964 the country had only some 1000 persons with secondary school certificates and fewer than 100 university graduates. By contrast, Uganda had already reached this stage by 1955 and Ghana by 1943. This particular legacy has been a principal constraint to post-independence economic and social development efforts.

Health and health care in Zambia

Zambia's colonial history has had an important impact on post-independence development of the health system. Development of infrastructure had been geared towards exploitation of the copper reserves which are concentrated in one area of the country and limited resources were invested in social and economic development of the country as a whole. Such health care as existed in rural areas was provided by mission hospitals.

Against this background post-independence governments have shown impressive commitment to financing the health sector. The policy of successive governments was the provision of free health services for the entire population. Annual budgetary allocations averaged 8% of total government recurrent expenditure up to 1982. However, persistent high inflation exacted a heavy toll, resulting in a decline in real health expenditure by some 41% between 1970 and 1984. The growing pace of decline in subsequent years also led to a reduction in the health sector's share of government expenditure. The combined effect of the two trends has been dramatic. During the period 1982–1987, real per capita expenditure declined by nearly 50%, standing at US$ 2.75 in 1989.

Nevertheless, there were considerable achievements in the provision of health care. In the 20-year period from independence to 1984 the number of hospitals rose from 48 to 83, an increase of 41%. In terms of hospital beds Zambia had one of the highest levels of provision in sub-Saharan Africa. The number of health centres increased from 306 to 845 during the same period, a rise of 64%. This commitment to health care, particularly to correcting the imbalances between urban and rural areas, was paralleled in

other social sectors such as education. The impact on health status of these early attempts at social development was evidenced by a continuing decline in the infant mortality rate (IMR) from 147 per 1000 live births in 1969 to around 100 per 1000 in 1980. These figures disguise considerable variations within the country. In general, the IMR has been higher in rural areas. Unfortunately, there is evidence that these achievements have been undermined in recent years. This trend has been linked to effects of the deteriorating economy such as chronic undernutrition, as well as the impact of acquired immunodeficiency syndrome (AIDS). A 1992 demographic and health survey estimated that the IMR had increased to 107 deaths per 1000 live births.

In this environment of serious economic decline it has not been possible to maintain the early commitment to creating health infrastructure. The imbalance in coverage in favour of the urban population and those living along the rail link has persisted. Moreover, the pattern of allocation of government budgets has consistently favoured the large urban hospitals. In 1980, for example, it was estimated that Lusaka and the urban Copperbelt, with only 3% of the population, accounted for around 60% of national health expenditure. A 1978 analysis estimated government expenditure in urban areas at 9 kwacha per person compared with 5.50 kwacha in rural areas. This pattern was maintained as economic decline set in. Consequently it was estimated in 1984 that the health system was accessible to only 75% of the total population, accessibility being measured in terms of the numbers of people living within 12 km of a health facility. The disaggregated figure for the rural population is 50%. However, access to effective health care may in fact be considerably lower as a result of erratic and limited supplies of essential drugs and vaccines as well as of basic supplies and equipment. A 1984 evaluation found that 75% of the health centres visited had not had sufficient antimalarial drugs during the previous year. Another common problem was lack of paraffin to keep refrigerators functioning and consequent inability to support vaccination programmes, which are an essential element of primary health care. It has been argued that such basic problems illustrate the lack of priority accorded to preventive health services in comparison with hospital-based curative care. In 1984 only some 37% of infants were fully vaccinated. Fortunately the problems of the immunization programme have subsequently been successfully tackled.

The economic crisis also resulted in serious shortages of health personnel and poor morale due to low salaries seriously eroded by inflation and to deteriorating working and living conditions. The capital budget was the first to be curtailed, resulting in cutbacks in maintenance of hospitals, health centres and the already modest staff accommodation. Even when external aid was provided to support construction and maintenance, problems of lack of transport and rising costs of building materials led to very slow execution of projects. Efforts by the Ministry of Health to alleviate the problem of low morale by offering extra allowances for staff

working in rural areas were thwarted by the need for government to provide similar payments to employees of all sectors, which it could not afford to do. Consequently, for example, the number of doctors in the country gradually declined. A 1987 study found that 60% of established posts were vacant. Moreover, only 13% of posts were filled by Zambian nationals. Most were filled by expatriates recruited on special contracts which included lump sum payments in foreign exchange as incentives to retain their services, although such incentives were not available to Zambian nationals.

In summary, the main factors contributing to the structure of the health system and the health status of the population were the historical background of curative orientation, lack of trained personnel and, above all, a dramatic decline in the economy as of the mid-1970s. It is against this background that the development of primary health care should be examined.

The health system

Health care in Zambia is provided by government institutions, religious missions, industries (particularly the mines), a number of parastatal companies, private practitioners, traditional healers and the armed services. Of these, the government has been the principal provider of care through a wide network of health centres and hospitals, followed by the religious missions which provide approximately 30% of total hospital beds, mainly in district and general hospitals.

During the 1980s the number of hospitals remained constant at 83. The number of health centres continued to increase steadily, following a 100% increase in the decade after independence was attained, thereby reflecting the policy of increasing the rural population's access to basic health services.

The 83 hospitals comprise three central (or tertiary) hospitals, three specialist hospitals (paediatric, psychiatric and leprosy), nine provincial hospitals located in each provincial capital and 68 district hospitals. Although the number of hospitals remained constant, the number of beds doubled, from 10 800 in 1964 to 22 800 in 1987.

Health centres provide services mainly to the rural population. Large health centres have beds for general inpatient care as well as for maternity care. Even small sub-centres may have a few beds, depending on the size of the population covered and the closeness of hospitals for referral. Health centres are staffed by paramedical personnel—medical assistants, nurses and health assistants dealing with public health services in the catchment area.

During the period up to the advent of multiparty democracy in 1991, responsibility for administration of the health care system resided with the three levels of the Ministry of Health, i.e. the central Ministry headquarters

in Lusaka, nine provincial offices and 57 district offices which reported to their immediate supervisor, the Provincial Medical Officer.

The central Ministry headquarters had responsibility for formulating health policy, planning, issuing policy guidelines to the lower levels, managing national preventive health programmes such as immunization and maternal health care, and allocating funds. Approval of national health policy was the responsibility of the Central Committee of the ruling party.

Management of the implementation of primary health care nationwide was the responsibility of one of three Assistant Directors of Medical Services. The so-called essential elements of primary health care—such as maternal and child health, immunization, nutrition and health education—came within the terms of reference of this officer. These were the traditional areas of responsibility of the Ministry of Health's department of preventive services. The introduction of primary health care in 1980 brought the role of the district into focus. It was at the level of the district that the concept of primary health care became tangible. Indeed, the district was defined as the basic unit of implementation for primary health care. Each of its health units—sub-centre, health centre and district hospital—had complementary roles to play, including interaction with local communities and their traditional birth attendants, traditional healers and community health workers.

The health of the Zambian people

A remarkable demographic feature of the population of Zambia is its growth rate, which at 3.2% per year (1993) is one of the highest in the world. This reflects the long-standing low priority accorded to family planning.

Life expectancy at birth has improved considerably since independence was attained, rising from an estimated 45 years for women and 41.8 years for men to 57.5 years and 55.4 years respectively in 1992. By far the greatest toll of mortality occurs among children. However, the IMR, which is considered a rough but useful indicator of social development, fell considerably in the period up to 1980. Accurate figures are difficult to obtain since so many births take place at home. Nevertheless, available statistics indicate a rate of 147 deaths per 1000 live births for 1969 which declined to around 100 per 1000 in the period 1980–1985. These are national averages which conceal higher levels of mortality in rural areas, especially in Luapula and Northern Provinces. Even in urban areas considerable variations occur, with very poor squatter compounds registering three times the rate of low density middle-class areas.

Communicable diseases are the major causes of mortality and morbidity in Zambia. They include malaria, diarrhoea, acute respiratory infections, measles, meningitis and tuberculosis. Other common causes of mortality and morbidity are malnutrition and accidents. AIDS has become a serious

public health problem since 1985, particularly in urban areas. A number of studies have shown that up to 30% of admissions to urban hospitals are HIV-related. Serious outbreaks of cholera have occurred each year since 1989, particularly affecting Northern, Luapula and Copperbelt Provinces.

Malaria is endemic and is one of the top three causes of mortality and morbidity in all age groups. There was an increase in the numbers of cases and deaths during the 1980s, resulting from resistance to treatment by chloroquine and other antimalarials as well as ineffective control measures.

Admissions to hospitals for tuberculosis have more than doubled since 1984 and may be related to HIV infection. The number of cases recorded in 1990 was 16 838 compared with 6747 in 1985. This rise has been accompanied by an increase in the case-fatality rate.

Malnutrition has been a persistent problem in Zambia and is a major cause of death in the 1–14-year age group. A study by the University Teaching Hospital in Lusaka reported that malnutrition, as a cause of death in those aged 1 to 14, rose from 18.5% in 1974 to 62.2% in 1984. A 1992 study reports that 50% of three-year-olds are stunted—that is, below the normal height for their age. This reflects chronic undernutrition. The problem is more serious in rural areas, particularly in Northern and Luapula provinces. The incidence of malnutrition increases during the pre-harvest season, from November to March, when food stocks have been depleted. Not surprisingly, this has come to be known as the "hungry season".

The introduction of the primary health care approach in 1980 was intended to respond to this array of serious but preventable health problems and to bring about a shift of emphasis from curative care to prevention and health promotion. In this respect immunization has been a notable success. Between 1983 and 1990 the proportions of fully immunized children rose from 37% to 73%. Another indicator of progress has been the proportion of pregnant women receiving antenatal care—up from 60% to 80% in the same period. This is offset by the fact that only one-third of babies are delivered with the assistance of medically trained personnel.

The chapters that follow trace the history of implementation of primary health care in Zambia. The reader may find it useful to refer back to this brief account of the health status of the Zambian people and the development of the health system which preceded primary health care. No country can start from scratch. Primary health care must take account of the past as well as the prevailing economic realities.

CHAPTER 2

Moving towards primary health care[1]

J.M. Kasonde & J.D. Martin

The development of a health care system containing elements of primary health care was already under way in Zambia before 1978. The Alma-Ata Conference gave considerable impetus and direction to this process and, as a consequence, the Government of Zambia decided to adopt primary health care as the main focus in further development of its national health services.

The planning process

Existing policies already called for free medical services for all the people of Zambia, and the five-year development plan emphasized the need to give priority to the rural population, whose needs were greatest. Community participation through self-help projects is a long-established tradition in Zambia, as evidenced by the fact that some 30% of existing rural health centres were built on a self-help basis.

These factors favoured the introduction of primary health care, despite a considerable bias towards the urban population, in the form of large sophisticated hospitals, and towards highly cure-oriented health services in the country as a whole.

From the outset the Ministry of Health fully realized the importance of intersectoral cooperation in planning and implementing primary health care. As a first step, a National Coordinating Committee was established, drawing its membership from the United National Independence Party, relevant government ministries (Agriculture and Water Development, Education, Information and Broadcasting, Finance, and Community Development) and the churches' medical association.

This well-intentioned experiment in intersectoral cooperation was to prove the first of many problems that would be encountered. The committee failed to function because the participants from the non-health sectors felt unable to contribute in the absence of specific proposals from the Ministry of Health. As a result, the Ministry of Health decided to produce its own detailed proposals for the introduction of primary health care, which would be presented to the National Coordinating Committee for

[1] This chapter first appeared in *World health forum*, 1983, 4: 25–30.

approval and thereafter would be submitted for nationwide discussion by all involved sectors and by the general public.

It was realized that this "top–down" approach would be criticized as contrary to the community initiative advocated by most proponents of primary health care. Yet it was concluded that the most practical way of achieving a workable primary health care system was to present proposals dealing with all aspects of organization so that people could appreciate how their needs and expectations fitted into the overall national framework and, particularly, so that they could appreciate the extent of available resources and modify their expectations to a realistic level. In addition, it was strongly felt that productive discussion required the presence of people who were aware of the overall national circumstances and who could appropriately and directly respond to questions and comments.

Two bodies were established for the purpose of preparing proposals. The first was a Primary Health Care Planning Committee, which included all heads of departments within the Ministry of Health and the country representatives of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). This committee was served by the second body, a full-time planning unit headed by an assistant director of medical services and comprising a specialist in community health, a health architect and a health planner.

The planning committee quickly identified the major problems to be tackled, which, essentially, presented a strong case in favour of a major reallocation of resources towards the rural areas and towards prevention of disease. The committee also suggested a practical administrative structure for implementing and sustaining primary health care activities at the community level. The task was completed over a period of six months and was finalized by the publication of proposals for primary health care in January 1980 in a document entitled *Health by the people: proposals for achieving health for all in Zambia.*

The primary health care document

It was intended that the document on primary care would be read and discussed not just by high officials in central ministries but also by community leaders in all districts of Zambia. Considerable effort therefore went into producing a document that was clearly and simply written, contained sufficient information yet was not so long as to discourage readers, and was attractively presented in a brightly coloured cover to avoid the initial suspicion that this was just another official report. The yellow cover greatly helped efforts to publicize the document's contents and led to a more familiar title, "The yellow book", the name by which the document has become known throughout the country.

The document was divided into a number of sections, beginning with a chapter summarizing the relevance of the primary health care approach in the Zambian context and an outline of the proposals for achieving the

required services. This was included to inform those, such as the press and politicians, who wanted a clear grasp of the proposals without reading the entire 100 pages. The value of including this section has been amply illustrated by the direct quotations from the chapter that have appeared in many newspaper articles and political speeches.

Other sections presented a review of the health sector performance since independence, highlighting the existing focus on urban-based curative care; proposals for organizing primary health care, with emphasis on community participation and intersectoral cooperation; a number of technical chapters dealing with tasks to be undertaken by the Ministry of Health in order to strengthen the infrastructure to support primary health care (e.g. manpower development, construction and upgrading of health centres, health education, transport); and, finally, a timetable for implementation.

The consultation process

The task of publicizing the proposals for primary health care and promoting discussion began at national level and moved through provincial and district levels to the people in their communities.

Health personnel at national and provincial levels were chosen to initiate and guide discussion because they were readily available for preliminary training and had already been consulted during the preparation of the proposals. Subsequently, health workers at district level were trained, through seminars at provincial level, to fulfil the same role in the discussions in their districts.

This direct communication with and guidance by people knowledgeable about the national health situation gave considerable assurance that the discussions would be truly productive. The procedure also had the advantage of enabling these health personnel to report the results of the discussions quickly to the Ministry of Health.

The process of consultation actually started with a one-day seminar in each provincial capital during February and March 1980. Primary health care proposals were introduced by the community health specialist from the Ministry of Health's Planning Unit (the national coordinating officer for primary health care), supported by the provincial medical officer and health education officer. Participants included senior provincial and district politicians, heads of government departments, church leaders and representatives of voluntary organizations.

The proposals were very favourably received in all provinces except the Copperbelt, a highly industrial and urbanized province well provided for by a network of hospitals catering for the curative needs of the population. In this province many people feared that the emphasis on preventive and promotive activities through primary health care would divert resources from their curative services. This fear was not dispelled until experience in the implementation of primary health care in other provinces became known.

The considerable publicity given to the seminars helped to generate much public interest. This was heightened by the coverage given to a national primary health care conference in April 1980, which was attended by some 300 persons representing national, provincial and district Party and government interests, as well as traditional healers, voluntary organizations, the churches and the press. The primary health care approach was unanimously accepted at this national gathering. Some of the original proposals contained in "The yellow book" were amended, and mental health was added to the list of primary services. The national conference was followed, from May 1980 until September 1981, by seminars at district level, which were attended by more than 10 000 people.

By the end of 1980 the Ministry of Health had received sufficient feedback to publish a final document on primary health care, entitled *Health by the people: implementing primary health care in Zambia*. Modelled closely on "The yellow book", this document set out firm and detailed guidelines for implementing primary health care, emphasizing the key role of the districts and the necessity for decentralizing responsibility for primary care to district level. The document thus recognized the considerable variations among districts and their right to establish their own health priorities.

Adoption of the final document

Responsibility for formulating national policy in Zambia lay at that time with the United National Independence Party, acting through its national council and the central committee.

The final document was submitted to the Party for consideration, and primary health care was formally approved as a national programme of the Party and its government following adoption by the central committee in August 1981.

Implementation

Implementation formally began in August 1981 with the formation of community health committees and selection of community health workers (including traditional birth attendants) for training, although initiatives had already been taken in many districts.

Strengthening of the infrastructure of the health sector, particularly within the districts, had already begun as early as January 1980, following publication of "The yellow book". This process involved a number of elements:

- Primary health care coordinators were established as a special cadre of health workers at district level to spearhead development of primary health care.
- Existing health workers were trained for their new roles in primary health care.